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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/883,941 | 06/20/2001 | Seiji Umemoto | Q65071 | 2681 |

7590 10/22/2002

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC.
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

CHOWDHURY, TARIFUR RASHID

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2871

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,941

Applicant(s)

UMEMOTO ET AL.

Examiner

Tarifur R Chowdhury

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 5-7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

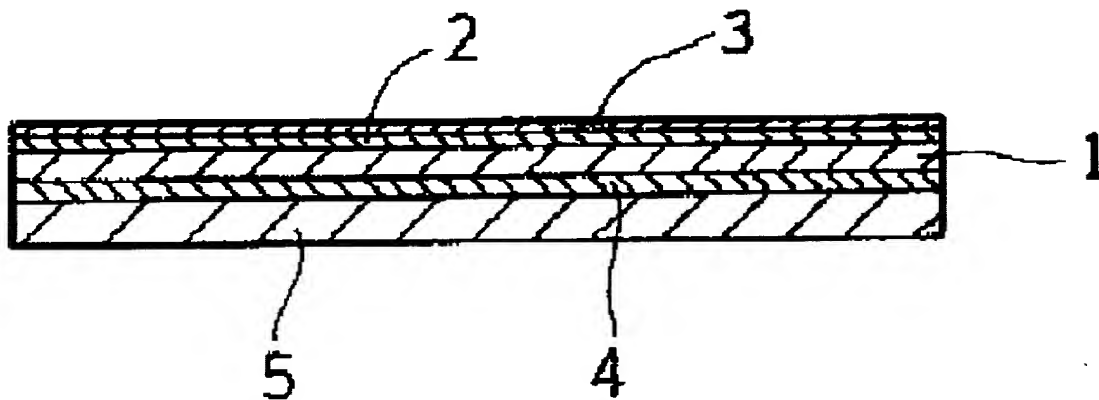
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shozo et al., (Shozo), JP 06-222352 (provided by the applicant).
6. Shozo discloses a resin substrate wherein a transparent resin plate (1) has at least a transparent conductive layer (3) via a dielectric thin film (2) (applicant's

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transparent layer) with a lower refractive index (n_2) than the resin plate (1) (abstract; Fig. 1).

【 図 1 】



Accordingly, claims 1 and 4 are anticipated.

As to claim 2, Shozo discloses that the thickness of the dielectric thin film is in the range of 20 nm to 100 nm (overlaps the claimed range at 100 nm) (page 2, paragraph 0016).

As to claim 3, Shozo also discloses that the dielectric thin film can be made of inorganic material (page 2, paragraph 0015).

As to claim 7, Shozo discloses that the resin substrate can be used in a liquid crystal display.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shozo as applied to claims 1-4 and 7 above and in view of Fukuchi et al., (Fukuchi), USPAT 5,645,901.**

10. Shozo does not explicitly disclose the claimed glass transition temperature for the resin plate.

Fukuchi discloses a resin plate having a glass transition temperature of not lower than 160° C and not higher than 200° C (overlaps the claimed range at 90° C or more) (abstract).

Fukuchi is evidence that ordinary workers in the art of liquid crystal would find a reason, suggestion or motivation to use a resin plate having a glass transition temperature of 90° C or more.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use a resin plate having a glass transition temperature of 90° C or more in the device of Shozo in order to optimize device performance.

11. Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shozo as applied to claims 1-4 and 7 above.

12. As to claim 6, Shozo does not explicitly disclose the use of color filter. However, it is common and known in the art to use color filters to obtain a color display. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Shozo such that employ a color filter so that a color display is obtained.

As to claim 8, Shozo is silent about the use of polarizers. However, it is common and known in the art to use polarizers on one side or both sides of the liquid crystal cell for several reasons such as to improve contrast, optimize device performance etc. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Shozo by employing a polarizer on one side or both sides of the substrate so that the device performance is optimized (see class 349, subclass 96).

As to claim 9, even though Shozo is silent about the claimed lighting device being used in the liquid crystal display panel, it is common and known in the art to use a lighting device and an optical means for converting the optical path of an illuminating light from the lighting device in a liquid crystal display panel for several reasons such as

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to optimize device performance and thus would have been obvious (see class 349, subclass 61).

Conclusion

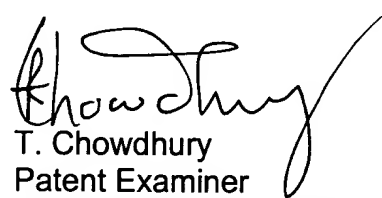
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

TRC
October 16, 2002


T. Chowdhury
Patent Examiner
Technology Center 2800